

Water Rights Bureau

New Appropriations Rules

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Sub-Chapter 1

36.12.101 DEFINITIONS

Unless the context requires otherwise, to aid in the implementation of the Montana Water Use Act and as used in these rules:

(1) "Act" means the Montana Water Use Act, Title 85, chapter 2, parts, 1-4, MCA.

(2) "Amount" refers to both a flow rate in gallons per minute (gpm), or cubic feet per second (cfs), and a volume of water in acre-feet (af).

(3) "Animal unit month (AUM)" means a measurement of livestock numbers.

- (a) one beef cow = 1 AUM
- (b) one dairy cow = 1.5 AUM
- (c) one horse = 1.5 AUM
- (d) three pigs = 1 AUM
- (e) five sheep = 1 AUM
- (f) 300 chickens = 1 AUM

(4) "Applicant" means the person, as defined in 85-2-102(14), MCA, who files a permit or change application with the department.

(5) "Application" for purposes of ARM 36.12.120, through 36.12.122, 36.12.1301, 36.12.1401, 36.12.1501, and 36.12.1601 means an application for beneficial water use permit, form no. 600, including criteria addendum form no. 600a, 600b or 600acf, or application to change a water right, form no. 606, including criteria addendum form no. 606a, 606b, 606asw, or 606t.

(6) "Appropriation right" means any right to the use of water which would be protected under the law as it existed prior to July 1, 1973, and any right to the use of water obtained in compliance with the provisions and requirements of the Act.

(7) "Associated right" means multiple water rights filed by the same or different appropriators that share the same point of diversion, place of use, or place of storage.

(8) "Augmentation plan" means a plan to provide water to a source of supply and its tributaries to mitigate the depletion effects of a permit or change authorization. The augmentation water right priority date is important to the success of any augmentation plan since call can be made on that water right. Examples of augmentation include, but are not limited to augmenting the source of supply with water from a nontributary source, or retiring all or a portion of senior water rights in the same source of supply in amounts equal to or greater than the depletion effects of the permit or change application.

(9) "Basin closure area" means a hydrologic drainage basin area within which applications for certain water use permits cannot be accepted. Basin closure areas can be designated by statute, administrative rule, or in compacts.

(10) "Certificate of survey number" means the official number given a parcel of land created by a registered land survey as filed with the county clerk and recorder.

(11) "Cfs" means a flow rate of water in cubic feet per second and is equivalent to 448.8 gallons per minute. Applications for a flow rate of less than one cfs will be converted to gallons per minute.

(12) "Change authorization or change" means an approval by the department to make a change in appropriation right as defined by 85-2-102, MCA and allowed by 85-2-402, MCA.

(13) "Claim" means a statement of claim filed pursuant to 85-2-221, MCA, for a water right established prior to July 1, 1973.

(14) "Combined appropriation" means an appropriation of water from the same source aquifer by two or more groundwater developments, that are physically manifold into the same system.

(15) "Cone of depression" means a cone-shaped depression of water table or pressure surface developing around a pumping well.

(16) "Consumptive use" means the annual volume of water used for a beneficial purpose, such as water transpired by growing vegetation, evaporated from soils or water surfaces, or incorporated into products that does not return to ground or surface water.

(17) "Controlled ground water area" means an area that has additional management controls applied to new ground water uses pursuant to 85-2-506 through 85-2-508, MCA.

(18) "Criteria addendum" means that additional portion of an application on which substantial credible information must address the criteria listed in 85-2-311 and 85-2-402, MCA.

(19) "Dam" means an artificial barrier created by man-made means designed to form a basin to hold water and create a pond or reservoir.

(20) "Deep percolation" means water that percolates below the root zone and infiltrates a deeper aquifer that is not used by other appropriators or connected to a surface water source.

(21) "Department" means the Montana department of natural resources and conservation (DNRC).

(22) "Domestic use" means those water uses common to a household including:

- (a) food preparation;
- (b) washing;
- (c) drinking;
- (d) bathing;
- (e) waste disposal;
- (f) cooling and heating; and
- (g) garden and landscaping irrigation up to five acres.

(23) "Drainage device" means a mechanism capable of draining or releasing substantially the full capacity of a reservoir.

(24) "Element" means the factors which describe a water right including, but not limited to:

- (a) the priority date;
- (b) source of supply;
- (c) point of diversion;
- (d) means of diversion;
- (e) period of diversion;
- (f) flow rate;
- (g) volume;
- (h) acreage;

- (i) purpose;
- (j) place of use;
- (k) period of use;
- (l) storage capacity; and
- (m) storage location.

(25) "Existing right", in addition to the definition given the term by section 85-2-102(8), MCA, includes any appropriation of water commenced prior to July 1, 1973, if completed according to the law as it existed when the appropriation was begun.

(26) "Evapotranspiration" means the loss of water from the soil both by evaporation and by transpiration from living plants.

(27) "Flow rate" is a measurement of the rate at which water flows or is diverted, impounded, or withdrawn from the source of supply for beneficial use, and commonly measured in cubic feet per second (cfs) or gallons per minute (gpm).

(28) "General abstract" means a department-generated document that reflects certain water right elements from the department's database.

(29) "Gpm" means a flow rate of water in gallons per minute.

(30) "Household" means the dwelling, house, or other domestic facilities where an individual, family, or social unit lives.

(31) "Hydraulically connected" means a saturated water-bearing zone or aquifer in contact with surface water or other water-bearing zone where rate of exchange of water between the two sources depends on the water level of the water-bearing zone or aquifer.

(32) "Hydrologic system" means the overall movement of water, including snow and ice, above, on or below the earth's surface.

(33) "Immediately or directly connected to surface water" means ground water which, when pumped at the flow rate requested in the application and during the proposed period of diversion, induces surface water infiltration.

(34) "Induced surface water infiltration" means that water being pumped from a ground water source is pulling surface water into the cone of depression.

(35) "Irrigation use" means the controlled application of water to land to supply water requirements not satisfied by rainfall.

(36) "Means of diversion" means the type of structures, facilities, or methods used to appropriate, impound, or collect water. Examples include, but are not limited to the following:

- (a) dike;
- (b) dam;
- (c) ditch;
- (d) headgate;
- (e) infiltration gallery;
- (f) pipeline;
- (g) pump;
- (h) pit; or
- (i) well.

(37) "Median year" means that water flow would be at the 50th percentile. Half of the years would have had higher flows and the other half would have had lower flows.

(38) "Multiple domestic use" means a domestic use by more than one household or dwelling characterized by long-term occupancy as opposed to guests. Examples are domestic uses by:

- (a) colonies;
- (b) condominiums;
- (c) townhouses; and
- (d) subdivisions.

(39) "Municipal use" means water appropriated by and provided for those in and around a municipality or an unincorporated town.

(40) "Notice area" means a geographic area determined by the department which may include water rights affected by an application.

(41) "Off-stream reservoir" means a reservoir that is not located on the source of supply and is supplied with water from a diversion means such as a pipe, headgate and ditch, or other means.

(42) "On-stream reservoir" means a reservoir that is located on the source of supply.

(43) "Owner of record" means a person who, according to the department's records, is the current owner of a water right.

(44) "Ownership update" means the updating of the department's water right ownership records by the filing of an ownership update form, form no. 608, pursuant to 85-2-421 through 85-2-426, MCA. The department's form does not transfer water rights or legally determine water right ownership. It only updates the department's centralized ownership records as reflected by the legal documents that actually transfer water rights.

(45) "Period of diversion" means the period in a calendar year when water is diverted, impounded, or withdrawn from the source of supply. It is described by the earliest month and day and the latest month and day water is diverted during each year.

(46) "Period of use" means the period in a calendar year when water is used for specified beneficial use. It is described as the earliest month and day and the latest month and day the water is beneficially used during each year.

(47) "Place of use (POU)" means the land, facility, or site where water is beneficially used.

(48) "Point of diversion (POD)" means the location or locations where water is diverted from the source of supply.

(49) "Pit, pit-dam, or pond" means a body of water that is created by manmade means, which stores water for beneficial use.

(50) "Possessory interest" means the right to exert some interest or form of control over specific land. It is the legal right to possess or use property by virtue of an interest created in the property though it need not be accompanied by fee title, such as the right of a tenant, easement holder, or lessee.

(51) "Primary diversion" means the initial point from which a diversion means will remove or impound water from the source of supply.

(52) "Priority date" means the clock time, day, month, and year assigned to a water right application or notice upon department acceptance of the application or notice. The priority date determines the ranking among water rights.

(53) "Project" means a place of use that has its own identifiable flow rate, volume, and means of diversion.

(54) "Recreational use" includes but is not limited to swimming, boating, water sports, and fishing.

(55) "Reservoir" means a pond, pit, or pit-dam, created by manmade means that impounds and stores water.

(56) "Return flow" means that part of a diverted flow which is applied to irrigated land and is not consumed and returns underground to its original source or another source of water, and to which other water users are entitled to a continuation of, as part of their water right. Return flow is not wastewater. Rather, it is irrigation water seeping back to a stream after it has gone underground to perform its nutritional function. Return flow results from use and not from water carried on the surface in ditches and returned to the stream.

(57) "Secondary diversion" means a diversion that is not from the source of supply but is a diversion that is used after the water is diverted from the source of supply at the primary diversion. For example, a pump in a ditch or reservoir is a secondary diversion.

(58) "Seepage water" means that part of a diverted flow which is not consumptively used and which slowly seeps underground and eventually returns to a surface or ground water source, and which other water users can appropriate, but have no legal right to its continuance. Typical examples of seepage water include underground losses from and irrigation ditch or pond.

(59) "Senior water right" means a water right with a priority date that is earlier in time than another water right.

(60) "Source aquifer" means the specific ground water source from which water is diverted for a beneficial use.

(61) "Source of supply" means the specific surface or ground water source from which water is diverted for a beneficial use.

(62) "Spring" means a hydrologic occurrence of water involving the natural flow of water originating from beneath the land surface and arising to the surface of the ground. A developed spring is groundwater of some physical alteration of its natural state occurs at its point of discharge from the ground, such as simple excavation, cement encasement, or rock cribbing. An undeveloped spring is surface water if no development occurs at its point of discharge and the appropriation is made from the waters flowing on the surface of the ground.

(63) "Stock use" means the use of water for livestock, including but not limited to cattle, horses, pigs, sheep, llamas, and animals owned and controlled on game farms. It does not include domestic animals such as dogs and cats or wild animals.

(64) "Surface water" means all water of the state at the surface of the ground, including but not limited to any river, stream, creek, ravine, coulee, undeveloped spring, lake, and character or manner of occurrence.

(65) "Temporary authorization or temporary change" means an authorization to change granted pursuant to 85-2-407 and 85-2-408, MCA, for a specific period of time and with an automatic expiration date.

(66) "Temporary emergency appropriation" means the temporary beneficial use of water necessary to protect lives or property by reason of fire, storm, earthquake, or other disaster or unforeseen

combination of circumstances which call for immediate action. An appropriation made necessary due to drought conditions is not a temporary emergency appropriation.

(67) "Temporary permit" means a permit to appropriate water granted pursuant to Title 85, chapter 2, part 3, MCA, for a specific period of time and with an automatic expiration date.

(68) "Transitory diversion" means a movable diversion that will divert water from several nonspecific points along a source of supply.

(69) "Tributary" means the following:

(a) a surface water source feeding another surface water source; or

(b) ground water hydraulically connected to a surface water source.

(70) "Unnamed tributary" means a surface water stream, coulee, or draw, which is not named on a United States geological survey (USGS) or Water Resources Survey (WRS) map.

(71) "Use of water for the benefit of the appropriator" means:

(a) the amount of water reasonably needed for the intended purpose;

(b) the amount of water needed for conveyance to the intended purpose; and

(c) water used for instream flow.

(72) "Volume" means the acre-feet of water. Twelve acre-inches or 325,851 gallons are equal to one acre-foot.

(73) "Waste water" means that part of a diverted flow which is not consumptively used and which returns as surface water to any surface water source, and which other water users can appropriate, but have no legal right to its continuance. A typical example is an irrigator who turns into the individual furrows traversing the irrigator's field from the head ditch more water than can seep into the ground. The water that stays on the surface and is not absorbed into the earth and which remains at the end of the furrow and is collected in a wastewater ditch is waste water.

(74) "Water flow estimating technique" means a mathematical method of estimating flow generally accepted by the department. This may be accomplished by correlating measurements of diversion system components with actual water use to estimate flow rate or volume of water used. An example is the use of measurements of power consumed by a pump to estimate the amount of water delivered by a pump. Another flow estimating technique would be to apply specific formulas developed by professional hydrologists based on climatic, basin or stream channel characteristics to estimate stream flow.

(75) "Water measuring device" means equipment that directly measures water flow in open or closed channels and conduits. Examples would be flow meters, weirs, flumes, and bucket and stop watch.

(76) "Water Resources Survey (WRS)" means a survey, by county, of water resources and water rights in Montana by the former state engineer's office or water resources board, predecessors of the department.

(77) "Water saving method" means a change to the actual water use system or management of water use in which the modification being made would decrease the amount of water needed to accomplish the same result. Water saving methods might include:

- (a) changing from a ditch conveyance to a pipeline;
- (b) lining an earthen ditch with concrete or plastic; and
- (c) changing management of a water system to decrease water consumption.

(78) "Zone of influence" means the horizontal extent of the cone of depression.

36.12.110 LEGAL LAND DESCRIPTION STANDARDS

(1) Primary or secondary points of diversion must be described as one or more of the following:

- (a) $\frac{1}{4}\frac{1}{4}$ section, section, township, range and county;
- (b) lot, block, subdivision, $\frac{1}{4}$ section, section, township, range and county;
- (c) government lot, $\frac{1}{4}$ section, section, township, range and county; or
- (d) certificate of survey number with or without a lot number, $\frac{1}{4}$ section, section, township, range and county.

(2) The point of diversion legal description of an on-stream reservoir must be described as the point where the dam or pit crosses the source of supply.

(3) Transitory diversions must be described as the most upstream diversion point and a measurement in stream miles downstream from the upstream point. For example the transitory diversion will extend from the upstream point to approximately one mile downstream.

(4) If secondary diversions are described, they must be identified as "secondary".

(5) The legal land description for the place of use must be listed to the nearest reasonable and concise legal land description. For example, it would be appropriate to describe 20 acres in the N $\frac{1}{4}$ NWNW rather than 10 acres in the NWNWNW and 10 acres in the NENWNW. For a subdivision covering most of the SW, it would be appropriate to describe the place of use as the SW rather than the NWSW, NESW, SWSW, and SESW.

36.12.111 MAP STANDARDS

(1) A United States geological survey (USGS) quadrangle map or United States department of agriculture (USDA) aerial photo must be included with the application and the following items must be clearly identified on the map:

- (a) north arrow;
- (b) scale bar;
- (c) section corners and numbers;
- (d) township and range numbers;
- (e) all past and proposed points of diversion;
- (f) all past and proposed places of use;
- (g) past and proposed reservoir locations; and

- (h) past and proposed ditch or pipeline locations.
- (2) maps must reflect the place of use of all associated water rights.
- (3) Additional maps must be submitted if the information on one map cannot convey the required information clearly and must be of the same scale so that they can be overlain.
- (4) For change applications to irrigation water rights, in addition to the map required in (1) and (2), a copy of the Water Resources Survey map, if available for the land affected by the change, shall be submitted with the historically irrigated acreage identified.
- (5) For change applications, all historically irrigated acreage must be identified on an aerial photograph that shows the date the aerial photo was taken.
- (6) In addition, a county plat map obtained from the county office may be submitted. The county plat map must show the same information as required under (1).

36.12.112 PERIOD OF DIVERSION AND PERIOD OF USE STANDARDS

- (1) Deviations from the standards listed below require information supporting the period of diversion or use requested in an application:
 - (a) domestic January 1 to December 31
 - (b) stock January 1 to December 31
 - (c) irrigation based on the climatic area designated by the USDA natural resources and conservation service (NRCS) which is generally as follows:
 - (i) climatic area I March 15 to November 15
 - (ii) climatic area II April 1 to October 31
 - (iii) climatic area III April 15 to October 15
 - (iv) climatic area IV April 20 to October 10
 - (v) climatic area V April 25 to October 5
- (2) Applications for diversions into a storage reservoir for later use must include the period of diversion for when water will be diverted into the reservoir and the period of use when water will be used from the reservoir.
- (3) Applications for temporary permits must identify the beginning and ending month, day, and year.
- (4) The basis for the requested periods for other uses must be explained.

36.12.113 RESERVOIR STANDARDS

- (1) An application project involving a new or existing reservoir must include the annual volume of water that will evaporate from the reservoir water surface.
- (2) The application must include information explaining how the storage reservoir will be managed to satisfy senior water rights. Senior water users are not entitled to water that has been legally stored.
- (3) If applicable, preliminary design specifications for a reservoir's primary and emergency spillways must be included.

- (4) If a reservoir is located off-stream:
 - (a) the conveyance means to and from the reservoir must be identified; and
 - (b) any losses that may occur with the means of conveyance must be calculated and identified.
- (5) For on-stream reservoirs, no flow rate is required. If a flow rate is requested for an on-stream reservoir, documentation must show why a flow rate is needed and reasonable.
- (6) Water tanks or cisterns that are a part of a water system are not considered storage reservoirs and a water right application is not needed to add a water storage tank or cistern as long as the flow rate and volume of a water right is not being increased.
- (7) If the application is for a reservoir for which the above standards are not applicable, the applicant must explain the reason why the standard is not applicable.

36.12.114 SOURCE NAME STANDARDS

- (1) A source name must adhere to one of the following, which are shown in order of preference:
 - (a) USGS map;
 - (b) water resource survey book; or
 - (c) DNRC water rights database.
- (2) Waste and seepage is not an accepted source name. Waste and seepage must be described as an unnamed tributary (UT) to the next named source into which the UT flows.

36.12.115 WATER USE STANDARDS

- (1) A water right has several elements, one of which is the amount of water that is used for each purpose described in the right. A reasonable amount of water will vary with the type and location of the use and will depend on various circumstances such as:
 - (a) soil conditions;
 - (b) method of conveyance;
 - (c) topography;
 - (d) climate;
 - (e) system efficiency; or
 - (f) other conditions affecting the particular use.
- (2) The department will use the following standards when reviewing notices or applications for new uses of water:
 - (a) for domestic use, for one household, 1.0 acre-foot per year of water for year-round use;
 - (b) for lawn, garden, shrubbery, and shelterbelts, 2.5 acre-feet per acre per year;
 - (c) for stockwater, a consumptive use of 15 gallons per day or .017 acre-foot per year per animal unit. Animal unit equivalencies for water consumption are set out in ARM 36.12.101 and the water conversion table, form no. 615;
 - (d) fire protection water needs shall be determined by the type of equipment used, diversion rate, the size of the area to be

covered, the frequency of the water use and must be explained and documented.

(e) For irrigation, the following table applies:

	Irrigation Standards				
	Climatic Area ¹ Acre Feet per Acre				
	I	II	III	IV	V
Sprinkler Irrigation 70% Efficiency	2.63 - 3.04	2.30 - 2.69	2.08 - 2.41	1.76 - 2.07	1.26 - 1.48
Level Border 60% Efficiency Design Slope Level	3.07 - 3.55	2.69 - 3.15	2.43 - 2.81	2.06 - 2.41	1.47 - 1.73
Graded Border 70% Efficiency Slope Group					
Design Slope .10%	2.63 - 3.04	2.30 - 2.69	2.08 - 2.41	1.76 - 2.07	1.26 - 1.48
Design Slope .20%					
Design Slope .40%					
Graded Border 65% Efficiency Design Slope .75%	2.84 - 3.28	2.48 - 2.90	2.24 - 2.59	1.90 - 2.23	1.36 - 1.60
Design Slope 1.5%					
Graded Border 60% Efficiency Design Slope 3.0%	3.07 - 3.55	2.69 - 3.15	2.43 - 2.81	2.06 - 2.41	1.47 - 1.73
Furrow 70% Efficiency Design Slope .10%	2.36 - 2.74	2.11 - 2.44	1.87 - 2.16	1.39 - 1.70	NA
Design Slope .20%					
Design Slope .40%					
Furrow 65% Efficiency Design Slope .75%	2.54 - 2.95	2.27 - 2.63	2.02 - 2.33	1.50 - 1.83	NA
Furrow 60% Efficiency Design Slope 1.5%	2.75 - 3.19	2.46 - 2.85	2.19 - 2.52	1.62 - 1.98	NA
Contour Ditch 60% Efficiency Design Slope .75%	3.07 - 3.55	2.69 - 3.15	2.43 - 2.81	2.06 - 2.41	1.47 - 1.73
Contour Ditch 55% Efficiency Design Slope 1.5%	3.35 - 3.87	2.93 - 3.43	2.65 - 3.07	2.24 - 2.63	1.60 - 1.88
Design Slope 3.0%					
Contour Ditch 45% Efficiency Design Slope 6.0%	4.10 - 4.73	3.58 - 4.19	3.24 - 3.75	2.74 - 3.22	1.96 - 2.30

¹ The irrigation climatic areas are identified in the 1986 Irrigation Climatic Areas of Montana map. Climatic area I is high consumptive use, climatic area II is moderately high consumptive use, climatic area III is moderate consumptive use, climatic area IV is moderately low consumptive use, and climatic area V is low consumptive use.

(3) A permit is required when a reservoir is proposed to include fire protection purposes and the volume of water reasonably needed for fire protection must be explained and must reference reliable industry sources.

(4) For fire protection reservoirs located within a basin closure area, evaporation losses must be made up from nontributary water sources or addressed in an augmentation plan.

(5) The flow rate and volume of water for any uses not listed in this rule must be calculated, explained, and documented based on the beneficial use and operation of the project.

(6) Deviations outside the standards will require information supporting the requested amount.

36.12.116 EVAPORATION STANDARDS

(1) The following reports contain acceptable methods for estimating evaporation losses:

(a) Joint Technical Working Group Report, Water Rights Compact Between the State of Montana and the Department of the Interior, Bureau of Land Management, November 1998;

(b) Estimation of Evaporation from Shallow Ponds and Impoundments in Montana, Donald E. Potts, Miscellaneous Publication No. 48, Montana Conservation and Experiment Station School of Forestry, University of Montana, Missoula, March 1988;

(c) Evaporation Pond Design for Agricultural Wastewater Disposal, USDA Soil Conservation Service, Montana Technical Note: Environment No. 7, February 1974;

(d) Evaporation from Lakes and Reservoirs, a study based on 50 years of weather bureau records, Minnesota Resource Commission, June 1942; and

(e) A standard USGS evaporation pan is acceptable. The standard pan is 4 feet in diameter and 10 inches deep and measured daily.

(2) Deviations from the acceptable standards in (1) require additional information supporting the volume requested for evaporation losses.

(3) The department will determine the acceptability of other evaporation loss estimates on a case-by-case basis.

36.12.120 BASIN CLOSURE AREA EXCEPTIONS AND COMPLIANCE

(1) In the numerous basin closure areas in Montana, the department cannot process an application unless it qualifies as a basin closure exception.

(2) An applicant must provide a written summary of their application information explaining how their application meets the basin closure exceptions and why their application located in a basin closure area can be processed.

(3) The department will determine whether an application in a basin closure area can be processed based on the information received from the applicant and will document its findings before it will review the application to determine whether it is correct and complete.

(4) While the department may determine that an application located in a basin closure area can be processed, an objector is able to refute the department's determination.

(5) In a basin closure area, evaporation losses must be mitigated.

(6) Augmentation plans are allowed in basin closure areas. An augmentation plan must mitigate the effects to the surface water source that would be depleted because of a proposed application.

(7) Augmentation must occur in the depleted reach and during the season of depletion.

(8) An augmentation plan must include a measuring plan to ensure that the source being depleted is receiving the benefits of the augmentation.

(9) If an augmentation plan requires more than one application, all applications will be processed simultaneously. If any of the augmentation applications is terminated or denied, all related applications will be terminated or denied.

(10) If an augmentation plan includes the filing of a Notice of Completion of Groundwater Development, the water must be from a nontributary source. The Notice of Completion must be filed with the department as soon as the water is used for augmentation.

(11) In basin closure areas that allow applications for ground water that is not immediately or directly connected to surface water, information must be included in the document required in (2) demonstrating that the application qualifies as a ground water exception.

(12) The department will not determine an application to be for a permit to appropriate ground water unless the department can determine from the information provided that the cone of depression or zone of influence of a pumping well will not induce surface water infiltration during the proposed period of diversion.

(13) The department hydrologist shall make a written determination that the evidence submitted by an applicant is sufficient on which to base a determination that the proposed source aquifer is not hydraulically connected or if hydraulically connected to surface water, will not induce surface water infiltration.

(14) An applicant must address whether the source aquifer is hydraulically connected to any surface water sources that lie within an estimated or actual delineated zone of influence. An applicant may use the results of an appropriate nearby aquifer test to approximate the zone of influence. Depending on circumstances, such as proposed flow rate and volume, cyclic pumping, well depth, or distance to surface water, an applicant may be able to demonstrate that there is not nor will there be a hydraulic connection to surface water when water is pumped at the proposed flow rate during the period of diversion.

(a) High and low transmissivity and storativity values can be evaluated and used to estimate a zone of influence. The applicant must determine if the source aquifer is hydraulically connected to surface water within the delineated zone of influence.

(b) Relative or absolute elevations of ground water levels and beds of surface water sources are needed to evaluate whether a hydraulic connection exists.

(c) Water level data may be obtained from existing wells located within the zone of influence or at the surface water source.

(d) If existing wells are not available, the installation of small diameter wells, pits, wellpoints, or piezometers, including those adjacent to or in the surface water source, can be used to determine the existence of a hydraulic connection.

(e) If an applicant demonstrates that the static ground water level is greater than 10 feet below the bed of a surface water source, the source aquifer is not considered hydraulically connected to surface water at that location. Further testing for induced surface water infiltration at the tested location is not required.

(f) If an applicant demonstrates that the static ground water level is less than 10 feet below the bed of a surface water source, additional proof is required to show whether the source aquifer is hydraulically connected to surface water. Additional proof must include an evaluation of capillary pressure, saturation, and unsaturated flow between the bed of the surface water source and the water table, and diurnal and seasonal fluctuations of static water levels. If additional proof is not provided, the source aquifer is considered to be hydraulically connected to surface water at that location. Further testing must be conducted to determine whether pumping the proposed well will induce surface water infiltration during the proposed period of diversion.

(15) An aquifer test must be conducted using methods described in ARM 36.12.121 that will determine the aquifer properties needed to determine the zone of influence for the period of diversion and the potential for drawdown to induce infiltration of surface water within the zone of influence.

(a) One or more observation wells may be needed to measure ground water levels between the proposed production well and surface water sources and to determine hydraulic gradients before and during aquifer testing.

(b) Staff gage(s) must be installed in surface water source(s) adjacent to the observation well(s) to monitor stage(s) during the aquifer test for comparison with ground water level(s).

(c) Relative or absolute elevations of ground water levels and surface water stages must be compared to determine whether the hydraulic gradient between the source aquifer and gaining surface water sources is reversed or whether the hydraulic gradient between losing surface water sources and the source aquifer is steepened. The occurrence of either during the aquifer test constitutes induced surface water infiltration.

(d) To evaluate whether induced surface water infiltration will occur during the period of diversion, an applicant must project drawdown to the surface water sources for the period of diversion using aquifer properties determined from the aquifer test. Analytical equations, an analytical ground water flow model, or a numerical ground water flow model may be used to evaluate whether induced surface water infiltration will occur.

(e) An applicant must evaluate whether a surface water body or reach is losing or gaining to evaluate whether a proposed well will induce surface water infiltration.

(i) If the applicant projects that drawdown will reach a losing surface water source that is hydraulically connected to ground water during the period of diversion, the department will determine that pumping the proposed well will induce surface water infiltration.

(ii) For gaining surface water sources, the hydraulic gradient must be compared with the slope of the cone of depression that would be created during the period of diversion.

If the comparison shows that the slope of the cone of depression is greater than the hydraulic gradient, the department will determine that pumping the proposed well will induce surface water infiltration.

(16) For ground water pits, the department will determine that evaporation losses do not induce surface water. If water is being pumped from the pit, then a hydraulic analysis is required to determine if pumping will induce surface water infiltration.

36.12.121 AQUIFER TESTING REQUIREMENTS

(1) There are numerous tests that can be performed on wells and aquifers, with a variety of objectives and procedures. An adequate aquifer test will depend on factors such as whether the well is located in a basin closure area (see ARM 36.12.120), the expected pumping schedule of the well, the potential interference with existing water rights and the characteristics of the aquifer in which the well is completed.

(2) Applicants are encouraged to confer with department staff prior to designing an aquifer test to ensure that the test will not have to be repeated, which may require additional expense.

(a) Department staff will provide guidance on testing procedures, monitoring, and reporting, but will not provide technical support or assistance.

(3) Aquifer testing must follow standard procedures that are discussed in hydrogeology textbooks and professional literature. The following are preferred aquifer testing procedures:

(a) A hydrogeologist, hydrologist, or engineer familiar with aquifer testing procedures must supervise the aquifer test, however, the supervisor does not need to be on site.

(b) Aquifer test data form no. 633, or equivalent, must be used to record the data required for the test.

(c) Pumping must be maintained at a constant discharge rate equal to or greater than the proposed pumping rate for the entire duration of the test. If the discharge rate varies, the applicant must note the clock time and discharge rate.

(d) Minimum duration of pumping during an aquifer test must be 24 hours for a proposed use or discharge of 150 gpm or less and a proposed volume of 50 acre-feet or less.

(e) Minimum duration of pumping during an aquifer test must be 72 hours for a proposed use or discharge of greater than 150 gpm and proposed volume greater than 50 acre-feet.

(f) Discharge of the pumped well must be measured with a reliable measuring device, which can include a barrel, in-line flow meter, flume, or weir.

(g) Discharge rate must be monitored and recorded with clock time and adjusted if necessary at 15-minute intervals during the first three hours of the aquifer test and at frequent intervals until the end of the test to maintain a constant discharge.

(h) Discharged water must be conveyed a sufficient distance from the production and observation wells to prevent recharge to the aquifer during the test. Adequate water conveyance devices include pipe, large-diameter hose (e.g., fire hose), lined ditch or canal, or an existing irrigation system.

(4) The following procedures are preferred to ensure monitoring is adequate:

(a) One or more observation wells must be completed in the same water-bearing zone(s) or aquifer as the proposed production well and close enough to the production well so that drawdown is measurable and far enough that well hydraulics do not affect the observation well.

(b) One or more observation wells must be completed in the overlying water-bearing zone(s) or aquifer if the proposed production well is purported to be completed in a hydraulically disconnected deeper aquifer.

(c) An observation well can be an existing well. An existing well should not be pumped, or if pumped should be monitored at a frequency necessary to separate the effects of its pumping.

(d) New observation wells must be constructed as described in ARM Title 36, chapter 21, subchapter 6. However, observation wells less than 10 feet deep are not subject to those rules. In those cases, observation wells might be constructed by simple excavation, or installing PVC pipe, perforated black pipe, or a sand point.

(e) Electronic pressure transducer/data logger instrumentation, electric well probes, pressure gauges on turbine pumped wells, or graduated steel tapes are acceptable methods of measuring ground water levels.

(f) Ground water levels in the production, at least one of the observation wells in the source aquifer, and at least one observation well in the overlying water-bearing zone or aquifer must be monitored at frequent intervals for at least two days prior to beginning the aquifer test to evaluate background water-level trends and the prepumping hydraulic gradient. An applicant must evaluate and correct for background water-level trends.

(g) Ground water-level drawdown in the production well and monitored observation well(s) during the pumping phase of the aquifer test must be measured with 0.01-foot precision according to the schedule specified on form no. 633.

(h) Ground water-level recovery in the production and monitored observation well(s) must be measured with 0.01-foot precision according to the schedule specified on form no. 633 or at a minimum, according to the specified schedule on form no. 633 for the first 24 hours of recovery and four times per day until end of the recovery test.

(5) A report describing the testing and monitoring procedures and presenting analyses, interpretations, and conclusions must be submitted with the application. The following reporting requirements are preferred:

(a) a topographic map with labeled locations of production and observation wells, discharge point, surface water monitoring sites, and a scale bar and north arrow;

(b) if available, a geologic map, stratigraphic, geomorphic, or lithologic descriptions, and drilling logs;

(c) distances between the pumping well and the observation well, and depths, dimensions, and perforated intervals of each well as specified on form no. 633;

(d) surveyed wellhead elevations and staff gage elevations if basin closure testing is required;

(e) a narrative description or conceptual model that describes the aquifer system;

(f) a description of testing methods;

(g) ground water level and surface water monitoring data;

(h) aquifer-testing data, transmissivity and storage coefficient determinations and effects to ground water and surface water availability;

(i) analyses, interpretations, and conclusions; and

(j) all pumping schedules and drawdown and recovery data must be submitted in electronic format.

36.12.122 CONTACTS

(1) If communication about a water right application filing or objection filing is to be conducted through an individual other than the applicant, the name address, and phone numbers must be supplied.

(2) If a contact person is identified as legal counsel, all communication will be sent only to the attorney unless the attorney provides written instruction to the contrary.

(3) If a contact person is identified as a consultant, employee, or lessee, the individual filing the water right form or objection form will receive all correspondence and a copy will be sent to the contact person.

(4) A contact cannot represent an applicant at a hearing unless the contact is an attorney.

Sub-Chapter 13 - Form Acceptance

36.12.1301 PERMIT AND CHANGE APPLICATION ACCEPTANCE

(1) A permit application will not be assigned a priority date and will be returned to the applicant if any of the following is not completed on the application form or included with the application:

(a) the name and address of the applicant;

(b) the water source of supply;

(c) the point of diversion;

(d) the place of use;

(e) the purpose for which the water will be used;

(f) the flow rate or volume required;

(g) the applicant's notarized signature; and

- (h) the appropriate filing fee found at ARM 36.12.103.
- (2) A change application will be returned to the applicant if any of the following is not completed on the application form:
 - (a) general abstracts of the water rights being changed reflecting the proposed changes;
 - (b) applicant's notarized signature; and
 - (c) the appropriate filing fee found at ARM 36.12.103.

Sub-Chapter 14 - Form Modifications

36.12.1401 PERMIT AND CHANGE APPLICATION MODIFICATION

- (1) Any element of a permit or change application may be modified prior to or after an application has been published.
- (2) An applicant may change the name on an application before publication by notifying the department in writing. For name changes after an application has been published and objections have been received, an applicant must notify the department and all parties in writing.
- (3) If a modification requires republication, the priority date of a permit application or the date received of a change application will be changed to the date the last modification was made.
- (4) Republication is required if a modification changes the nature or scope of the permit or change application information. The following require republication:
 - (a) the flow rate is increased;
 - (b) the volume is increased;
 - (c) the acreage is increased;
 - (d) the period of diversion is expanded;
 - (e) the source of supply is changed;
 - (f) the point of diversion is changed;
 - (g) the place of use is changed;
 - (h) the purpose is changed;
 - (i) the period of use is expanded, unless the application involves a use from a reservoir and the impact would not change; and
 - (j) any modification where the effect on the source of supply or its tributaries changes the impact described from the originally published information.
- (5) For modifications made after an application has been published, the cost of republication and mailing of individual notices must be paid by the applicant.
- (6) A new analysis of the application criteria must be submitted when an application modification requires republication and the department will make a new correct and complete determination on the modifications prior to republication.
- (7) If an applicant decides at any point in the water right application process to complete a different application for the same project, the applicant must complete a new application form. The date received will be the date the new application is submitted

to the department. The department will review the application based on the requirements for that type of application.

Sub-Chapter 15 - Deficiency Letters and Termination

36.12.1501 PERMIT AND CHANGE APPLICATION DEFICIENCY LETTER AND TERMINATION

(1) If the department determines the application does not contain the information requested in ARM 36.12.1601, the department will notify the applicant in one deficiency letter of any defects in a permit or change application within 180 days of receipt of the application. The defects and the administrative rule not met will be identified in the deficiency letter.

(2) If all of the requested information in the deficiency letter is postmarked and submitted to the department within 30 days of the date of the deficiency letter or an extension of time of no more than 15 days, the priority date on a permit application will not be changed, or for change applications, the date received will not be changed. A request for extension of time must be submitted in writing.

(3) If all of the requested information in the deficiency letter is postmarked or submitted within 31 to 90 days of the date of the deficiency letter unless extended under (2), the permit application priority date will be changed to the date when the department receives all of the requested information, or for a change application, the date received will be changed.

(4) If all of the requested information in the deficiency letter is not postmarked or submitted within 90 days of the date of the deficiency letter, the permit or change application will be terminated and the application fee will not be refunded.

Sub-Chapter 16 - Correct and Complete Determination

36.12.1601 WATER RIGHT PERMIT AND CHANGE - CORRECT AND COMPLETE DETERMINATION

(1) An application deemed correct and complete can advance to the next stage of the application process.

(2) An application deemed correct and complete does not entitle an applicant to a provisional permit or change authorization.

(3) Providing correct and complete information is not necessarily the same as proving the statutory criteria. The department, with or without receipt of objections can only grant an application if the criteria for issuance of a permit or change application are met.

(4) A water right permit application will be deemed correct and complete if a permit applicant's information, required to be submitted by ARM 36.12.109 through 36.12.115, 36.12.120, 36.12.121,

36.12.1301, 36.12.1401, 36.12.1701 through 36.12.1707, and 36.12.1802, conforms to the standard of substantial credible information and all the necessary parts of the application form requiring the information, including a criteria addendum, have been filled in with the required information.

(5) A water right change application will be deemed correct and complete if an applicant's information, required to be submitted by ARM 36.12.109 through 36.12.115, 36.12.121, 36.12.1301, 36.12.1401, 36.12.1801, 36.12.1802, 36.12.1901 through 36.12.1904, and 36.12.2001, conforms to the standard of substantial credible information and all the necessary parts of the application form requiring the information, including a criteria addendum, have been filled in with the required information.

Sub-Chapter 17 - Permit Application Requirements

36.12.1701 FILING A PERMIT APPLICATION

(1) An application for beneficial water use permit (form no. 600) must be filed when an applicant desires to use ground water that exceeds 35 gallons per minute or a volume of 10 acre-feet, or for ground water sources within a controlled ground water area, or for all surface water appropriations.

(2) An application must contain sufficient factual documentation to constitute probable believable facts sufficient to support a reasonable legal theory upon which the department should proceed with the application.

(3) Form no. 600 and the applicable criteria addendum must be completed and must describe the details of the proposed project. The form and addendums must be filled in with the required information.

(4) Each source of supply requires a separate application. For example, if an application is for two diversions, one on an unnamed source and another on a source to which it is tributary, two separate applications must be submitted, one for each source of supply.

(5) One application is allowed for one purpose and multiple points of diversion.

(6) One application is allowed for several purposes if all the points of diversion supply the same purposes.

(7) Separate applications are required if multiple purposes are supplied by different points of diversion on the same source, except if the entire project is manifold into one system, then a single application is allowed. "Manifold" means two or more diversions from the same source, which are connected into a single system for the same project or development. An example of a manifold system is two pumps on one source or two wells pumping from the same aquifer which divert water into the same reservoir or cistern.

(8) Calculations, references, and methodologies used to determine flow rate, volume, or reservoir capacity must be included in the application materials.

(9) Flow rate (in gallons per minute [gpm] or cubic feet per second [cfs]), volume (in acre-feet) or reservoir capacity (in acre-feet) figures will be rounded to the nearest tenth.

(10) The source name standards outlined in ARM 36.12.114 must be followed.

(11) The legal descriptions for the point of diversion and place of use must be identified as required under ARM 36.12.110.

(12) The period of diversion standards outlined in 36.12.112 must be followed.

(13) The reservoir standards outlined in ARM 36.12.113 must be followed if an application involves a reservoir.

(14) The permit application materials must include a general project plan stating when and how much water will be put to beneficial use. For appropriations over 4,000 af or more and 5.5 cfs or more, or for water marketing, additional information is required by 85-2-310(4)(a), MCA.

(15) Photographs must include the name of the photographer, the date taken, and an explanation of what fact or issue the photograph is offered to verify.

(16) If there are associated water rights to the application, they must be identified and additional information may be required.

(17) If a permit application is to supplement another water right, the water right numbers and abstracts of the associated water rights must be included in the application.

(18) An explanation of why supplemental water is needed and how the associated water rights will be managed must be included in the application materials.

(19) The flow rate at which water will be diverted from the source of supply for each purpose, a reasonable volume of water for each purpose, and the period of time that water will be used for each purpose must be identified.

(20) An application to only increase the flow rate or volume must reflect a value of zero in the nonapplicable field. For example, if an applicant is applying to only increase the flow rate of water taken from a source, but no additional volume is needed, the application flow rate blank should be completed with the additional flow of water requested and the blank for acre-feet (volume) should reflect zero.

(21) Information must be included in the application that explains why the time period for completion is requested. The explanation may include information about the cost and magnitude of the project and the complexity of the project or any other reason for the time period identified to complete the project.

(22) An applicant shall explain why required information is not applicable to the applicant's proposed project.

36.12.1702 PERMIT APPLICATION CRITERIA - PHYSICAL SURFACE WATER AVAILABILITY

(1) Substantial credible information must be provided showing there is surface water physically available at the flow rate and volume that the applicant seeks to appropriate for the proposed period of diversion.

(2) If actual stream gaging records are available, they should be used to estimate the flow rates and volumes at the source of supply in the amount the applicant seeks to appropriate, the following is required:

(a) the medians of the monthly average flow rates and volumes for the stream gaging station period of record during the proposed months of diversion;

(b) a legible copy or excerpt of the data source, study or report(s) used in documenting water availability in the source of supply; and

(c) a description of all conclusions, calculations, data, and assumptions used in estimating water availability.

(3) If actual flow rate and volume data are not available to estimate the monthly median flows, then the applicant will need to use an accepted method for estimating surface water flow rates and volumes in conjunction with discharge measurements to validate the estimation technique used. Some accepted methods are listed in (6).

(4) When stream flow gaging station data are not available and monthly median flow estimation techniques are used, the following stream discharge data must be collected:

(a) Stream flow measurements in cfs or gpm must be collected at least once every month during the proposed period of diversion at the most suitable location on the source of supply, and at or directly upstream of the proposed point of diversion. Measurements taken and submitted under this method must include:

(i) a legible copy of the actual flow measurements;

(ii) calculations used to establish flow rates in cfs or gpm;

(iii) the dates measurements were taken, with a description of current weather conditions. Weather conditions include sky conditions, noting any rain and snow, approximate temperature, and approximate wind conditions, e.g., "partly cloudy, light wind, about 60 degrees" or "light rain, calm, about 65 degrees" or "clear, moderate wind, about 40 degrees".

(iv) the type of measuring device or method used; and

(v) a written legal land description or map clearly showing where the measurements were taken.

(5) If the application involves new storage of surface water such as a reservoir, pond or pit, or enlargement of a natural or manmade lake, the application must include the following information:

(a) that the source of supply has the volume of water physically available for the proposed beneficial use;

(b) information and data that show the amount of water to be stored is physically available during a median year and in the amount the applicant seeks to appropriate using the methods described in (2) and (3); and

(c) projected evaporation and seepage losses.

(6) The following reports may contain accepted methods for estimating surface water flow rates and volumes:

(a) "Methods for Estimating Monthly Stream Flow Characteristics at Ungaged Sites in Western Montana," USGS Open-file Report 89-40;

(b) "A Method for Estimating Mean and Low Flows of Streams in National Forests of Montana," USGS Water Resources Investigation Report 85-4071;

(c) "Stream Flow Characteristics of Mountain Streams in Western Montana," USGS Open-File Report 84-244;

(d) "Estimated Monthly Percentile Discharges at Ungaged Sites in the Upper Yellowstone River Basin in Montana," USGS Water Resources Investigation Report 86-4009;

(e) "A Method for Estimating Mean Annual Runoff of Ungaged Streams Based on Characteristics in Central and Eastern Montana," USGS Water Resources Investigation Report 84-4143;

(f) "Estimates of Monthly Flow Characteristics at Selected sites in the Upper Missouri River Basin, Montana, Base Period Water Years 1937 - 86," USGS Water Resources Investigations Report 89-4082;

(g) "Mean Annual Runoff and Peak Flow Estimates Based on Channel Geometry of Streams in Southeastern MT," USGS Water Resources Investigation Report 82-4092;

(h) "Mean Annual Runoff and Peak Flow Estimates Based on Channel Geometry of Streams in Northeast and Western Montana," USGS Water Resources Investigation Report 83-4046; and

(i) "Estimates of Mean Monthly Stream Flow for Selected Sites in the Musselshell River Basin, Montana," USGS Water Resources Investigation Report 89-4164.

(7) Other professionally documented hydrologic methods for estimating stream flow or annual runoff which may be applicable and acceptable to the department, including the Orsborn method, Mannings equation, U.S. natural resources and conservation service-developed mean annual runoff data, and drainage area information paired to gaged streams in similar type basins may be acceptable. The department will determine the acceptability of other methods on a case-by-case basis.

(a) If one of these methods is used, the applicant must also include a brief description of the method used and assumptions and calculations used in estimating flow rates and volumes.

36.12.1703 PERMIT APPLICATION CRITERIA – PHYSICAL GROUND WATER AVAILABILITY

(1) Applicants for ground water must provide substantial credible information demonstrating that water is available for their use from the source aquifer in the amount the applicant seeks to appropriate during the proposed period of diversion.

(2) Information demonstrating physical ground water availability must include an evaluation of drawdown in the applicant's production well for the maximum pumping rate and total volume requested in the permit application.

(3) The drawdown projected for the proposed period of diversion must be compared to the height of the water column above the pump in the proposed production well to determine if the requested appropriation can be sustained.

(4) The requirements of ARM 36.12.121 must be followed.

36.12.1704 PERMIT APPLICATION – EXISTING LEGAL DEMANDS

(1) Legal demands usually exist on the source of supply or its downstream tributaries and may be affected by a proposed water right application, including prior appropriations and water reservations. These existing legal demands will be senior to a new application and the senior rights must not be adversely affected.

(2) The applicant must identify the existing legal demands on the source of supply and those waters to which it is tributary and which the applicant determines may be affected by the proposed appropriation.

(3) The applicant must provide an abstract of those water rights identified.

(4) After an application is deemed correct and complete, for public notice purposes the department shall, independent of the information provided by the applicant under this chapter, identify existing water right owners that may be affected by the proposed application.

36.12.1705 PERMIT APPLICATION CRITERIA - COMPARISON OF PHYSICAL WATER AVAILABILITY AND EXISTING LEGAL DEMANDS

(1) To determine if water is legally available, the applicant must compare the physical water supply at the proposed point of diversion and the legal demands within the area of potential impact. An applicant must become familiar with senior water rights operations to accurately evaluate the effect to the senior water right.

(2) Applicants must analyze the senior water rights on a source of supply and those waters to which it is tributary within the area of potential impact and provide a written narrative comparing the physical water supply at the point of diversion during the period of diversion requested and the legal demands that exist for the water supply during that same period.

(3) If known patterns of use differ from the legal water rights filings, an explanation may be submitted explaining the current water use operation. For example, if a water reservation has not been perfected, that information may help to explain water is legally available.

36.12.1706 PERMIT APPLICATION CRITERIA – ADVERSE EFFECT

(1) Adverse effect for permit applications is based on the applicant's plan showing the diversion and use of water and operation of the proposed project can be implemented and properly regulated during times of water shortage so that the water rights of prior appropriators will be satisfied.

(2) A written narrative must be provided addressing the potential adverse effect to the water rights identified in ARM 36.12.1704.

(3) For surface water applications, in addition to (1) and (2), the applicant shall explain the rate and timing of depletions from the source of supply and its downstream tributaries and what effect that will have on other water rights.

(4) For ground water applications, in addition to (1) and (2), the applicant shall describe how water levels in wells of prior water rights will be lowered and the rate and timing of depletions from hydraulically connected surface waters.

36.12.1707 PERMIT APPLICATION CRITERIA – ADEQUATE DIVERSION MEANS AND OPERATION

(1) The diversion works must be capable of diverting the amount of water requested to accomplish the proposed use without unreasonable loss through design or operation.

(2) The diversion works must conform to current industry design, construction, and operation standards.

(3) Wells must be constructed according to ARM Title 36, chapter 21, subchapter 6.

(4) The applicant shall describe how the proposed system will be operated, from point of diversion through the place of use and on through the discharge of water, if any.

(5) Preliminary design plans and specifications for the diversion and conveyance facilities and the equipment used to put the water to beneficial use must be submitted including the following:

(a) the proposed flow rate and volume design capacity;

(b) the expected overall efficiency, including diversion, conveyance, and system efficiencies;

(c) the proposed diversion schedule, such as number and timing of irrigation sets;

(d) system design, construction, or operation features which are intended to reduce or eliminate adverse effects on other water rights; and

(e) the flow rate and operation of diversions must be described.

(6) For developed springs, an explanation of how the spring will be developed must be included.

Sub-Chapter 18 - Permit Change Applications

36.12.1801 PERMIT AND CHANGE APPLICATIONS – BENEFICIAL USE

(1) Water may be appropriated for beneficial use:

(a) by a governmental entity for the public;

(b) by a person for the sale, rent, or distribution to others; or

(c) by a person for the person's own use, unless provided otherwise by statute.

(d) or for other person's use, according to law.

(2) The applicant must explain the following:

- (a) how the purpose for the water benefits the applicant; and
- (b) that the requested flow rate and volume for each purpose is reasonably needed to accomplish that purpose.
- (3) An application to change must contain information explaining why the requested flow rate and volume to be changed are reasonable for the intended purpose.

36.12.1802 PERMIT AND CHANGE APPLICATIONS – POSSESSORY INTEREST

- (1) An applicant or a representative shall sign the application affidavit to affirm the following:
 - (a) the statements on the application and all information submitted with the application are true and correct; and
 - (b) except in cases of an instream flow application, or where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use, the applicant has possessory interest in the property where the water is to be put to beneficial use or has the written consent of the person having the possessory interest.
- (2) If a representative of the applicant signs the application form affidavit, the representative shall state the relationship of the representative to the applicant on the form, such as president of the corporation, and provide documentation that establishes the authority of the representative to sign the application, such as a copy of a power of attorney.
- (3) The department may require a copy of the written consent of the person having the possessory interest.

Sub-Chapter 19 - Change Applications

36.12.1901 FILING A CHANGE APPLICATION

- (1) An application to change a water right (form no. 606) and applicable addendum must be filed when an applicant desires to change the point of diversion, place of use, purpose of use, or place of storage of a water right.
- (2) A change application must contain sufficient factual documentation to constitute probable believable facts sufficient to support a reasonable legal theory upon which the department should proceed with the application.
- (3) The department must consider historical use in determining whether changing the water right would constitute an enlargement in historic use of the original water right.
- (4) Form no. 606 and applicable addendum must be filled in with the required information.
- (5) The application must contain a brief narrative explaining the general nature of the requested changes to the water right and why it is being requested.

(6) Only an owner of record, as shown in the department's water right records, can apply to change a water right, except if a change application is for a water right lease pursuant to 85-2-436, MCA, the change applicant must be the state of Montana, department of fish, wildlife, and parks.

(7) A current detailed water right abstract of each water right being changed must be submitted with proposed changes noted on the abstract. The abstract should reflect how the water right would appear if the change application was granted.

(8) Multiple water rights may be changed on one application if, upon completion of the project, the diversion, place of use, purpose, or storage information will be exactly the same for each changed water right. If not, separate applications must be filed.

(9) The legal descriptions for the point of diversion and place of use must be identified as required in ARM 36.12.110.

(10) Calculations showing how the historic and proposed flow rate, volume, and capacity were determined must be included in the application materials and the methodology employed must be described.

(11) Flow rate (in gpm or cfs), volume (in acre-feet) or reservoir capacity (in acre-feet) will be rounded to the nearest tenth.

(12) The proposed diverted and consumed volume of water must be identified for each changed right. The diverted volume will likely be greater than the consumed volume. The consumed volume may include plant use, seepage water, wastewater, and deep percolation water. The consumed volume cannot include return flow.

(13) The time needed to complete and put the changed project into operation must be identified. Information must be included in the application materials that justify the requested time. The justification must include information that would lead a person not familiar with the project to conclude the period requested is reasonable and needed to complete the change and put the changed water right to use.

(14) For a change application that is only to add stock tanks to an existing stock water system, the following rules apply:

(a) form no. 606 must be completed and must describe the details of the proposed project. Form no. 606 and applicable addendum must be filled in with the required information;

(b) a current department generated water right abstract of each water right being changed must be submitted. The proposed changes must be noted on the abstract. The abstract should reflect how the water right would appear if the change application was granted.

(c) the applicant must show that each water right to be changed has been used and must explain the extent of the historic use including the flow rate and volume; and

(d) the applicant must provide information to show that the historic flow rate diverted will be adequate even though the additional stock tanks may be further away from the source of supply.

(15) An applicant shall explain why required information is not applicable to the applicant's proposed project.

36.12.1902 CHANGE APPLICATION - HISTORIC USE

(1) Final water court approved stipulations, master's reports, or examination information related to the water right being changed must be submitted with the application, however, this information or an abstract of a water right from the department or the Montana water court by itself is not sufficient to prove the existence or extent of the historical use.

(2) The amount of water being changed for each water right cannot exceed or increase the flow rate historically diverted under the historic use, nor exceed or increase the historic volume consumptively used under the existing use.

(3) An applicant shall compare historical acres irrigated to acres identified as irrigated in the Water Resources Survey, if available for the place of use. If the Water Resources Survey does not support the historical irrigation alleged in the application, the applicant shall explain why. Information from irrigation journals or logs or old aerial photographs can be submitted for consideration.

(4) If an applicant provides a "best available estimate" to any element or requirement in (5) through (7), an explanation of how the estimate was derived must be included. For example, best available estimates might be based on the following:

- (a) aerial photographs depicting irrigated land;
- (b) aerial or other photographs showing diversion or conveyance structures;
- (c) Water Resources Survey book information;
- (d) Water Resources Survey field notes;
- (e) water commissioner field notes;
- (f) natural resources conservation service information;
- (g) affidavits from persons with first-hand knowledge of historic use;
- (h) calculation of historic ditch capacities;
- (i) log books or diaries of previous irrigators; or
- (j) other information that provides independent corroboration of the historic use that allows reasonable estimates of historic diversion and historic consumption.

(5) The applicant shall provide a narrative of the historic use of each water right being changed. The description must be based on actual physical measurements when available and use commonly accepted hydraulic principles. The narrative must contain the following:

- (a) the maximum flow rate diverted from each point of diversion listed on the water right during the period of diversion;
- (b) total volume of water consumed for each water right during the period of diversion;
- (c) a description of how and when unconsumed water returns to a ground or surface water source and how that return flow volume was calculated; and
- (d) documentation of the basis of all data used in the analysis, methods of analysis and calculations.

(6) The applicant shall provide written documentation

explaining the historic use and how the information was acquired to substantiate the following elements of each water right proposed to be changed:

- (a) point of diversion;
- (b) period of diversion;
- (c) volume used for each purpose;
- (d) period of use for each purpose;
- (e) place of use for each purpose;
- (f) maximum number of acres historically irrigated;
- (g) means of conveyance;
- (h) location of reservoir;
- (i) maximum volume in acre-feet of water stored;
- (j) maximum number of times a reservoir was filled during a year; and
- (k) maximum period of time when water was collected for storage.

(7) A narrative must be included in the application materials explaining the historic operation of the right, including flow rate, volume, period of diversion, period of use, and period of storage are reasonable and typical of the purpose for which the historic right was used.

36.12.1903 CHANGE APPLICATION - ADVERSE EFFECT

(1) The applicant must identify the water rights which the applicant determines may be affected by the changes the applicant is proposing to make and must provide a department general abstract of the water rights identified.

(2) The applicant must identify, analyze, and document the effects to the other water rights including, but not limited to, the following:

- (a) water rights using the existing or proposed point of diversion;
- (b) other ditch users;
- (c) down-slope water users;
- (d) the effect to water rights dependent on the return flow;
- (e) the effects of changing the historic diversion pattern including rate and timing of depletions;
- (f) for ground water applications, the applicant shall explain how the changed water right will affect water levels in wells of junior and senior water rights and the rate and timing of depletions from hydraulically connected surface waters, and what effect those changes will have on those water rights within the notice area.

(3) A comparison between the historic consumptive use of the water rights being changed and the consumptive use if the change application was granted must be included with the application.

(4) After an application is deemed correct and complete, for public notice purposes, the department shall, independent of the information provided by the applicant under this chapter, identify existing water right owners that may be affected by the proposed application.

36.12.1904 CHANGE APPLICATION CRITERIA - ADEQUATE DIVERSION MEANS AND OPERATION

(1) The diversion works must be capable of diverting the amount of water requested to accomplish the proposed use without unreasonable loss through design or operation.

(2) Preliminary design plans and specifications for the current and/or proposed diversion and conveyance facilities and the equipment used to put the water to beneficial use must be submitted with the application including the following:

(a) a description of the historical operation, including the typical diversion schedule from the point of diversion to the place of use;

(b) a description of how the proposed water right will be operated, from point of diversion through the place of use and on through the discharge of water, if any;

(c) the historic and proposed flow rate and volume design capacity;

(d) the historic efficiency and the projected overall efficiency, including diversion, conveyance, and system efficiencies.

(3) The diversion works must conform to current design, construction, and operation standards.

Sub-Chapter 20 - Salvage Water

36.12.2001 SALVAGE WATER APPLICATIONS

(1) Salvage water, defined at 85-2-102(16), MCA, includes seepage, wastewater, or deep percolation water and may be used by the appropriator, moved to other lands, leased, or sold after implementing a water saving method and proving lack of adverse effect to other water rights.

(2) In addition to the rules for change applications, a salvage water application must include a report documenting the volume of water that is being saved by the proposed water saving method.

(3) For the purpose of implementing 85-2-419, MCA, the destruction of phreatophytes is not a water saving method. For example, one cannot deforest the cottonwoods or other trees or brush on a source to obtain salvage water.

(4) Salvaged water includes water lost to deep percolation when the applicant provides geohydrologic evidence that deep percolation occurs.